In the Claims

What is claimed is:

1. A low formaldehyde emission coating composition comprising:

a formaldehyde resin; and

a polyamide scavenger.

2. The coating of claim 1, wherein the polyamide is a synthetic polyamide.

3. The coating of claim 2, wherein the synthetic polyamide is selected from the group consisting essentially of polyacrylamides, polymethacrylamides, polyamide telomers, N-substituted polyamides and combinations thereof.

4. The coating of claim 1, wherein the polyamide is a protein.

5. The coating of claim 4, wherein the protein is selected from the group consisting of casein, soy protein and combinations thereof.

6. The coating of claim 1, wherein the formaldehyde resin is selected from the group consisting of melamine formaldehyde, urea formaldehyde, phenol formaldehyde and combinations thereof.

7. The coating of claim 1, further including at least one of the components selected from the group consisting of catalysts, fillers, surfactants, buffers, viscosity controllers, pigments, and flattening agents.

8. The coating of claim 7, wherein the catalyst comprises an acid catalyst.

9. The coating of claim 1, wherein the coating comprises about 3% to about 50% by dry weight of the polyamide scavenger.

10. A method of making a coating composition comprising:

providing a formaldehyde resin;

providing a polyamide scavenger; and

combining the formaldehyde resin and polyamide scavenger.

11. The method of claim 10, wherein the polyamide is a synthetic polyamide.

12. The method of claim 11, wherein the synthetic polyamide is selected from the group consisting essentially of polyacrylamides, polymethacrylamides, polyamide telomers, polyamide copolymers, polyamide terpolymers, polyamide tetrapolymers, N-substituted polyamides and combinations thereof.

13. The method of claim 10, wherein the polyamide is a protein.

14. The method of claim 11, wherein the protein is selected from the group consisting of casein, soy protein and combinations thereof.

15. The method of claim 10, wherein the formaldehyde resin is selected from the group consisting of melamine formaldehyde, urea formaldehyde, phenol formaldehyde and combinations thereof.

16. The method of claim 10, further including the components selected from the group consisting of catalysts, fillers, surfactants, buffers, viscosity controllers, pigments, flattening agents and combinations thereof.

17. The method of claim 15, wherein the catalyst comprises an acid catalyst.

18. The method of claim 10, wherein about 3% to about 50% by dry weight of the coating comprises the polyamide scavenger.

19. A coated panel comprising:

a panel having a backing side and a facing side; and

a coating layer comprising a formaldehyde resin and a polyamide scavenger.

20. The coated panel of claim 19, wherein the coating layer is adjacent to the backing side.

21. The coated panel of claim 19, wherein the panel is an acoustical panel.

22. The coated panel of claim 19, wherein the polyamide is selected from the group consisting essentially of polyacrylamides, polymethacrylamides, polyamide telomers, polyamide copolymers, polyamide terpolymers, polyamide tetrapolymers, N-substituted polyamides and combinations thereof.

23. The coated panel of claim 19, wherein the polyamide is a protein.

24. The coated panel of claim 23, wherein the protein is selected from the group consisting of casein, soy protein and combinations thereof.

25. The coated panel of claim 19, wherein the formaldehyde resin is selected from the group consisting of melamine formaldehyde, urea formaldehyde, phenol formaldehyde and combinations thereof.

26. The coated panel of claim 19, wherein the polyamide scavenger comprises between about 3% to about 50% by dry weight of the coating.

27. A method of coating a panel comprising:

providing a panel having a facing side and a backing side; and

applying a coating comprising a formaldehyde resin and a polyamide scavenger to the backing side.

28. The method of claim 27, wherein the coating is applied by the method selected from the group consisting of roll coating, spraying, curtain coating, extrusion, knife coating and combinations thereof.

29. The method of claim 27, wherein the polyamide is selected from the group consisting essentially of polyacrylamides, polymethacrylamides, polyamide telomers, polyamide copolymers, polyamide terpolymers, polyamide tetrapolymers, N-substituted polyamides and combinations thereof.

30. The method of claim 27, wherein the polyamide is a protein.

31. The method of claim 30, wherein the protein is selected from the group consisting of casein, soy protein and combinations thereof.

32. The method of claim 27, wherein the formaldehyde resin is selected from the group consisting of melamine formaldehyde, urea formaldehyde, phenol formaldehyde and combinations thereof.

33. The method of claim 27, further including adding components selected from the group consisting of catalysts, fillers, surfactants, buffers, viscosity controllers, pigments, and flattening agents and combinations thereof to the coating.

34. The method of claim 32, further including adding an acid catalyst to the coating.

35. The method of claim 27, wherein the polyamide scavenger comprises between about 3% to about 50% by dry weight of the coating applied to the panel.

36. The method of claim 27, wherein the panel is an acoustical panel.

37. A low formaldehyde emission panel comprising:

a binder comprising a formaldehyde resin and a polyamide scavenger; and

fiber.

38. The panel of claim 37, wherein the polyamide scavenger is a synthetic polyamide.

39. The panel of claim 38, wherein the synthetic polyamide is selected from the group consisting essentially of polyacrylamides, polymethacrylamides, polyamide telomers, polyamide copolymers, polyamide terpolymers, polyamide tetrapolymers, N-substituted polyamides and combinations thereof.

40. The panel of claim 37, wherein the polyamide is a protein.

41. The panel of claim 40, wherein the protein is selected from the group consisting of casein, soy protein and combinations thereof.

42. The panel of claim 38, wherein the formaldehyde resin is selected from the group consisting of melamine-formaldehyde, urea-formaldehyde, phenol formaldehyde and combinations thereof.

43. The panel of claim 38, wherein the binder further includes the components selected from the group consisting of catalysts, organic and inorganic fillers, surfactants, buffers, viscosity controllers, pigments, flattening agents and combinations thereof.

44. The panel of claim 38, wherein the binder further includes an acid catalyst.

45. The panel of claim 38, wherein about 3% to about 50% by dry weight of the binder comprises the polyamide scavenger.

46. The panel of claim 37, wherein the fibers are selected from the group consisting of cellulose, mineral fibers, glass fibers, and combinations thereof.

47. The panel of claim 37, wherein the panel comprises wood particles, wood strands, and wood layers.